

A NEW ENTOCYTHERID OSTRACOD OF THE
GENUS *PLECTOCYTHERE*

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Included among entocytherid ostracods recovered from a burrowing crayfish collected by Mark Odell in Bell County, Kentucky was a single specimen of an undescribed member of the genus *Plectocythere*. On 26 May 1976 the locality was visited again by Odell, accompanied by Dan Carver and me. A larger series of crayfish was dug and a sufficient number of ostracods were obtained to allow the following description.

I am grateful to Dr. Horton Hobbs, Jr. for critically reading this manuscript and providing invaluable suggestions and other assistance during its preparation.

Plectocythere odelli, new species

Fig. 1

Male.—Pigmented eye present. Shell ovate with greatest height posterior to midlength; submarginal setae widely spaced anteriorly, posteriorly, and ventrally, absent dorsally. Terminal tooth of mandible with cusps.

Copulatory complex without finger guard; ventral part of peniferum bulbous, produced anteroventrally in tapering curved projection; prominent spine arising anteriorly from projection near tip; spine and tip of peniferum parallel and directed anteriodorsally producing "U" shaped configuration; spine not arising from same plane on peniferum as terminal projection but situated mesial to it.

Penis consisting of separate spermatic and prostatic elements not contiguous along most of their length; each element as long as, or longer than, clasping apparatus and reaching or projecting beyond tip of peniferum; accessory groove absent; clasping apparatus not clearly divisible into horizontal and vertical rami, external border entire, internal border with 2 prominences distal to midlength, apex with 4 small rounded scallops.

Female.—A triunguis female has not been definitely associated with this species.

Size.—Measurements, in mm, of 7 males and 3 females:

| | Holotype | Males | Females |
|----------------|----------|-----------|-----------|
| Length (range) | 0.40 | 0.40-0.43 | 0.36-0.39 |
| Average | — | 0.41 | 0.38 |
| Height (range) | 0.21 | 0.21-0.24 | 0.18-0.22 |
| Average | — | 0.23 | 0.20 |

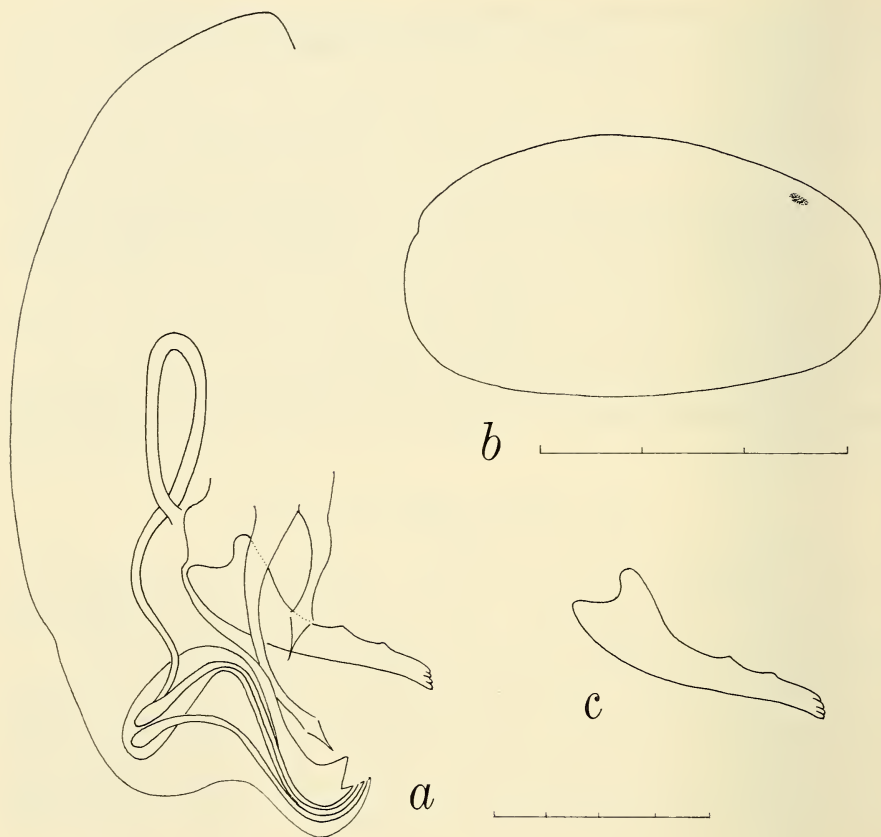


Fig. 1. *Plectocythere odelli*: *a*, lateral view of right valve of male; *b*, Copulatory complex of male; *c*, clasper apparatus of male. Scale is 0.04 mm for *a* and *c*, 0.3 mm for *b*.

Variation.—The only noteworthy variation observed in this series involves the contour of the ventral and posterior margin of the shell. In some specimens the ventral margin is entire while in others it shows a slight concavity. Likewise, the posterior margin may be entire, may have a slight concavity, or may bear a small bulge.

Type-locality.—Burrows in seepage area along north side of Kentucky Route 74, 3.5 mi W of Middlesboro, Bell County, Kentucky. This species is known only from the type-locality.

Disposition of types.—The holotypic male has been deposited in the National Museum of Natural History (Smithsonian Institution), USNM 156570. Paratypes are in the collections of the Smithsonian Institution (5 males) and the author (1 male).

Host.—The host is an undescribed species of the genus *Cambarus* (*Jugicambarus*) near *dubius*.

Entocytherid associates.—*Dactylocythere brachystrix*, *Dactylocythere spinata*, *Donnaldsoncythere donnaldsonensis*, *Entocythere* sp.

Relationships.—Two other species are currently assigned to the genus *Plectocythere*; *P. crotaphis* Hobbs III, 1965 and *P. johnsonae* Hobbs and Hart, 1966. Of these, *P. odelli* has its closest affinities with *P. crotaphis* in which the terminal portion of the peniferum is sinuous and the clasping apparatus almost identical. *P. johnsonae* differs from both in having a slightly curved, rather than sinuous, peniferum and a clasping apparatus with internal border entire and single rounded eminences on the external and mesial borders. *P. odelli* differs from these and all other known entocytherids in possessing a "U" shaped terminal part of the peniferum.

Hart and Hart (1974, page 208) have illustrated the two penifera of the male holotype of *P. crotaphis* and show the tip of one to be directed distally and the other proximally. In the series of this species available to me, this variation is common and suggests that the tip of the penifera may have been flexible in life. In all of the known *P. odelli*, however, the orientation of the terminal tips of the penifera are identical and seem to have been rigid.

Remarks.—Due to the close relationship of *P. odelli* and *P. crotaphis*, it was felt that a greater knowledge of variation in the structure of the copulatory complex of *P. crotaphis* was desirable. Consequently, Dr. Horton Hobbs, Jr., kindly reexamined the crayfish from which the unique holotype of *P. crotaphis* had been obtained and recovered two additional male specimens. In addition, an effort was made to collect more material at the type-locality. Although the precise area from which the type was collected could not be located, a good series of specimens was obtained from burrowing crayfish, *Cambarus (Jugicambarus)* sp., collected along US Route 119, 6 miles NE of US Route 25E, Bell County, Kentucky. None of these additional specimens shows any development of a spine on the peniferum.

The three members of this genus are known only from burrowing crayfish of the *Cambarus dubius* complex and none has been collected outside of the State of Kentucky.

Etymology.—It is a pleasure to name this species for Mark Odell who not only collected the first specimen I had seen but also has contributed many other ostracods to my collection and that of the Smithsonian Institution.

Literature Cited

- Hart, D. G., and C. W. Hart, Jr. 1974. The ostracod family Entocytheridae. Acad. Nat. Sci., Philadelphia, Monograph 18, 239 pp.

- Hobbs, H. H., Jr., and C. W. Hart, Jr. 1966. On the entocytherid ostracod genera *Ascetocythere*, *Plectocythere*, *Phymocythere* (gen. nov.), and *Cymocythere*, with descriptions of new species. Proc. Acad. Nat. Sci., Philadelphia 118(2):35-61.
- Hobbs, H. H. III. 1965. Two new genera and species of the ostracod family Entocytheridae, with a key to the genera. Proc. Biol. Soc. Washington 78(19): 159-164.

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